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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/037,538	01/04/2002	Joerg Bewersdorf	5005.1016	7277

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EXAMINER

NGUYEN, THONG Q

ART UNIT PAPER NUMBER

2872

DATE MAILED: 08/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

SP

Office Action Summary	Application No.		Applicant(s)	
	10/037,538		BEWERSDORF ET AL.	
	Examiner		Art Unit	
	Thong Q. Nguyen		2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) 26-38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1/4/02&12/13/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Invention I in the reply filed on Sept. 27, 2004 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). As a result of applicant's election, claims 1-25 are examined in this Office action, and claims 26-38 have been withdrawn from further consideration and being directed to non-elected invention.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

3. The drawings contained six sheets of figures 1-6 were received on 1/4/2002. These drawings are approved by the Examiner.

Specification

4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

5. The disclosure is objected to because of the following informalities: a) The Summary of the Invention is objected to because it contains numerous details of the inventive device described in numerous pages and thus does not comply with the

requirement of 37 CFR 1.73. Applicant should provide a brief description for the Summary of the invention and move other detailed description of the invention to the section thereof "Detailed Description of the Invention"; b) Page 1: line 9, what does each of the terms thereof "I2M", "I3M" and "I5M" mean? Applicant should provide a definition for each term; c) Page 7: line 3, what does the term thereof "HBO" mean? Applicant should provide a definition for the term. There are still some grammatical and idiomatic errors in the specification. Applicant should carefully proofread the specification. Appropriate correction is required.

Claim Objections

6. Claims 2, 6, 10, 17, and 21 are objected to because of the following informalities. Appropriate correction is required.

- a) In claim 2, it is unclear about the terms thereof "I2M", "I3M" and "I5M" recited on lines 2-3 of the claim. Applicant should provide a definition for each term
- b) Regarding claim 6, the phrase "preferably is constant" (line 2) renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).
- c) Regarding claim 10, the phrase "in particular to fluoresce" (line 3) renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).
- d) In claim 17, the recitation related to the illuminating beam path in the feature thereof "the light reflected or induced...an additional detector" (lines 1-4) lacks a proper antecedent basis. Should the terms thereof "or illuminating beam path"

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(line 3) be deleted to make the claim comply with the requirement of 35 USC 112, second paragraph?

e) In claim 21, the recitation related to the illuminating pinhole in the feature thereof "the illumination or...as the pinhole" (lines 1-3) lacks a proper antecedent basis. Should the terms thereof "illumination or" (line 2) be deleted to make the claim comply with the requirement of 35 USC 112, second paragraph?

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

8. Claims 1-2, 4-14 and 22-25, as best as understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Lanni et al (U.S. Patent No. 4,621,911, submitted by applicant).

Lanni et al disclose a standing wave field microscope having an illuminating system having a laser source, an observation system and a system for supporting a fluorescent specimen. The system for supporting a fluorescent specimen as described in columns 8-10, in particular, in column 9, and shown in figure 7 comprises two specimen support units (76, 88) sandwiched the specimen wherein the first support unit is a dichroic element and the second support unit (88) is a glass plate and acts as a cover for protection of the specimen. The specimen is provided and associated with a lower surface of the support unit (76) wherein light incident and reflect from that surface is used to illuminate and form a standing wave field and then to be detected and observed by the observation system. The support unit (76) can be a wavelength-selective or dichroic reflector or a set of various dichroic reflectors for the collection a complete standing wave luminescence microscopy data array which set of various dichroic reflects are understood as a combination of layers having different luminescent properties. The dichroic reflector is chosen so that its reflectivity is high for a particular wavelength at a particular angle of incidence. It is noted that the dichroic reflector is as understood by one skilled in the art is made by coating a wavelength-selective layer or a dielectric layer on a substrate. Regarding to the method/process step as recited in claims 13-14, such a method/process step of inducing light at the planar area of the support unit by way of coherent anti-strokes Raman scattering as claimed is not germane to the

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issue of patentability of the device itself and thus is not given a patentable weight as decided in the Courts. See also *In re Dike*, 157 USPQ 581 (CCPA 1968).

9. Claims 1-4, 13-18 and 23-25, as best as understood, are rejected under 35 U.S.C. 102(e) as being anticipated by Kawano et al (U.S. Patent No. 6,597,499).

Kawano et al disclose a standing wave field microscope having an illuminating system, an observation system having a detecting system, and a system for supporting a fluorescent specimen. The system for supporting a fluorescent specimen as described in columns 4-6, in particular, in column 5, and shown in figures 5a and 7 comprises two specimen support units (342, 344) sandwiched the specimen wherein both support units are glass plates and the first support unit (342) acts as a cover for protection of the specimen. The specimen is provided and associated with a lower surface of the support unit (342) wherein light incident and reflect from that surface is used to illuminate and form a standing wave field (347) and then to be detected and observed by the observation system. The light reflected from the fluorescent specimen is guided to the detecting system comprises a dichroic beam-splitter (312) and a charged-coupled detector (318). Regarding to the method/process step as recited in claims 13-14, such a method/process step of inducing light at the planar area of the support unit by way of coherent anti-strokes Raman scattering as claimed is not germane to the issue of patentability of the device itself and thus is not given a patentable weight as decided in the Courts. See also *In re Dike*, 157 USPQ 581 (CCPA 1968).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 3 and 15-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lanni et al in view of Hell (EP 491 289, submitted by applicant).

The interference microscope with an observation system as provided by Lanni et al does not clearly disclose the use of a detecting system having an optical element for splitting light from the illuminated/observed light path to a detector. However, the use of a beamsplitter for splitting light from a specimen to a detecting system having a detector and a pinhole located in front of the detector is known to one skilled in the art as can be seen in the confocal microscope provided by Hell. See page 4 and figure 1 in which the light from the specimen (9) is splitted by the beam-splitter (10) and then is detected by the detector system having a pinhole (12) and a detector (13). Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the microscope provided by Lanni et al by using a beam-splitter in the light path as suggested by Hell for the purpose of guiding the reflected light to a detecting system for the purpose of further analysis and/or record of the images of the specimen.

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12. Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawano et al in view of Hell.

The interference microscope with an observation system as provided by Kawano et al does not clearly disclose the use of a pinhole element in front of the detector. However, the use of a beam-splitter for splitting light from a specimen to a detecting system having a detector and a pinhole located in front of the detector is known to one skilled in the art as can be seen in the confocal microscope provided by Hell. See page 4 and figure 1 in which the light from the specimen (9) is splitted by the beam-splitter (10) and then is detected by the detector system having a pinhole (12) and a detector (13). Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the microscope provided by Kawano et al by using a pinhole element in front of a detector as suggested by Hell for the purpose of controlling the amount of light to be detected/recorded by a detector.

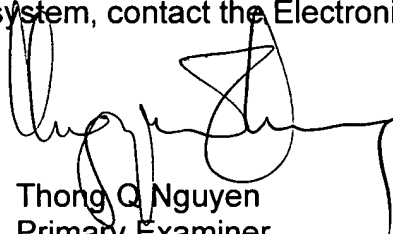
Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q. Nguyen whose telephone number is (571) 272-2316. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A. Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thong Q. Nguyen
Primary Examiner
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